Dams on the Columbia River

CONCEPT: The Columbia River is the source of two-thirds of the electricity used in the Pacific Northwest. This power, and many other benefits —from controlling floods to shipping commodities by barge — start with the dams on the Columbia River.

DIRECTIONS: Show the video "River of Power." (28.5 minutes) This video does more than just show the history and development of the largest hydroelectric system in the world; it expresses a value system very different from the Native American system introduced in the last lessons. Suggest students listen for references to the river, such as untamed and unharnessed, that communicate those values.

The following inquiry attempts to have students focus on the significance of the changes (from a free flowing river to a series of dams and reservoirs) and the values expressed in these changes. As we make our choices for the future, what values are we expressing today, and what consequences will we produce tomorrow.

INQUIRY: Power generation was not developed until well after large numbers of European settlers arrived in the Northwest in the late 1800s. What were the first uses of the river? Navigation, small irrigation projects, and large-scale harvest of the salmon. What are some of the changes that occurred as the large dams were built on the Columbia River? Begin with Bonneville Dam, which went into operation in 1938.

The production of large amounts of electricity changed many aspects of people's lives. There was power to pump water into homes for indoor plumbing, power for irrigation projects that turned desert into productive farm land, and power for industry. The dams also changed the rivers themselves, turning them into controlled systems of dams and reservoirs. This has helped navigation and prevented floods. It has also affected the fish and wildlife that were adapted to river life.

The Northwest hydropower system has become the largest hydroelectric system in the world. What does that represent for all of us living in the Pacific Northwest? Power means technology, industry, jobs, and economic growth. The Northwest has the lowest electricity rates of any region in the country. Industries such as, aluminum and pulp and paper use large amounts of electricity and benefit from these low rates. Some industries, such as aluminum smelting, were attracted to the region because of the abundant and low-cost electricity.

Have students list as many benefits as they can remember from the video. Many of the benefits should be examined more closely. For example, flood control is necessary to protect developments located in a flood plain. If development was restricted from the flood plains, how much flood control would be needed? Where would airports be located if early developers hadn't built on the flood plain? Could commodities that travel on barges up the river be transported by some other means, maybe by train or truck?

During the video, scenes of hand pumps and outhouses are shown during the discussion of the benefits of electricity. Can students make the connection between electricity and toilets? Indoor plumbing, such as toilets and showers, was made possible by the use of electricity to power pumps to pipe water indoors.

At the end of the video, there are descriptions of the river that reflect views very different from the Native American perspective. Can students identify these viewpoints and comment on them? How does a viewpoint of a river influence the way people use it?